

TOSHIBA

FILE NO. 333-200206
SUPPLEMENT

SERVICE MANUAL

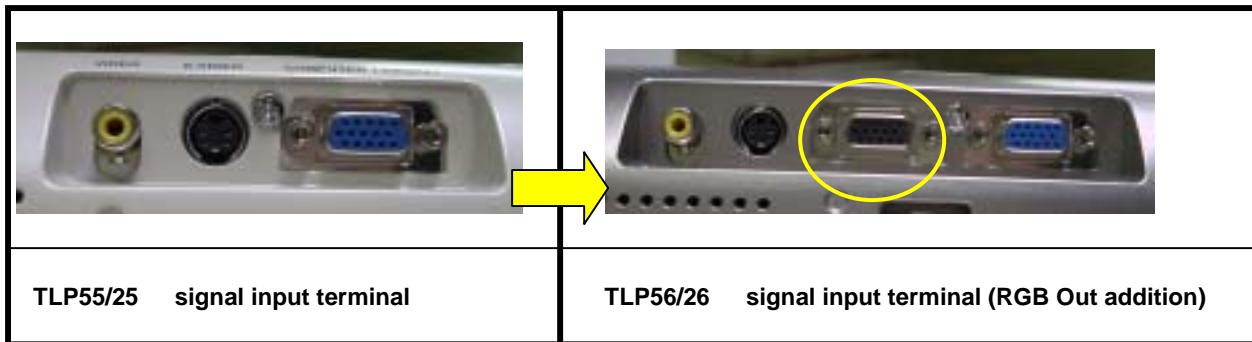
3LCD PROJECTOR

TLP-560/561
TLP-260/261

— SUMMARY —

This service manual covers only different portions from service manual (File No. 330-200103) for TLP55/25 series.

As for TLP56/26, a RGB Out terminal is addition to TLP55/25.



The following parts list covers only the different parts from the base models,

For the other parts, please refer to the service manual(File No, 330-200103) of the base models,

The base models of each model are shown below,

Model	Base Model
TLP560	TLP550
TLP561	TLP551 (with document imaging camera)
TLP260	TLP250
TLP261	TLP251 (with document imaging camera)

Difference parts list (TLP56 Series)

Location No.	Part No. (US)	Part No. (EU)	Part No. (UK)	Description
E200	23405130	23405130	23405130	Optical Engine
E260S	23405132	23405132	23405132	Optical Main Frame
E261S	23405071	23405071	23405071	Optical Sub Frame
U001	23787665	23787665	23787665	PC Board MAIN
U002	23787666	23787666	23787666	PC Board SENSOR
U003	23787667	23787667	23787667	PC Board DOOR
A100	23530337	23530337	23530337	Top Cover
A300	23553722	23553722	23553722	Front Tag TLP560
A303	23553859	23553859	23553859	Label Rating TLP560
A320	23553726	23553726	23553726	Label Carton Box TLP560
A300	23553721	23553721	23553721	Front Tag TLP561
A303	23553858	23553858	23553858	Label Rating TLP561
A320	23553725	23553725	23553725	Label Carton Box TLP561
Y200	23565648	23565648	23565648	Owner's Manual CD-ROM
Y201	23565649	-----	-----	Owner's Manual E/F
Y202	23565650	-----	-----	Owner's Manual SPA
Y204	-----	23565651	-----	Owner's Manual E/G
Y205	-----	23565652	-----	Owner's Manual F/S
Y206	-----	-----	23565653	Owner's Manual ENG
Y221	23589364	23589364	23589364	Sheet Quick ENG
Y222	23589365	23589365	-----	Sheet Quick FRA
Y223	23589366	23589366	-----	Sheet Quick SPA
Y225	-----	23589368	-----	Sheet Quick GER
Y226	-----	23589369	-----	Sheet Quick POR
Y227	-----	23589370	-----	Sheet Quick ITA

Difference parts list (TLP26 Series)

Location No.	Part No. (US)	Part No. (EU)	Part No. (UK)	Description
E200	23405140	23405140	23405140	Optical Engine
E260S	23405111	23405111	23405111	Optical Main Frame
E261S	23405071	23405071	23405071	Optical Sub Frame
U001	23787668	23787668	23787668	PC Board MAIN
U002	23787669	23787669	23787669	PC Board SENSOR
U003	23787670	23787670	23787670	PC Board DOOR
A100	23530337	23530337	23530337	Top Cover
A300	23553863	23553863	23553863	Front Tag TLP260
A303	23553861	23553861	23553861	Label Rating TLP260
A320	23553865	23553865	23553865	Label Carton Box TLP260
A300	23553862	23553862	23553862	Front Tag TLP261
A303	23553860	23553860	23553860	Label Rating TLP261
A320	23553864	23553864	23553864	Label Carton Box TLP261
Y200	23565648	23565648	23565648	Owner's Manual CD-ROM
Y201	23565649	-----	-----	Owner's Manual E/F
Y202	23565650	-----	-----	Owner's Manual SPA
Y204	-----	23565651	-----	Owner's Manual E/G
Y205	-----	23565652	-----	Owner's Manual F/S
Y206	-----	-----	23565653	Owner's Manual ENG
Y221	23589364	23589364	23589364	Sheet Quick ENG
Y222	23589365	23589365	-----	Sheet Quick FRA
Y223	23589366	23589366	-----	Sheet Quick SPA
Y225	-----	23589368	-----	Sheet Quick GER
Y226	-----	23589369	-----	Sheet Quick POR
Y227	-----	23589370	-----	Sheet Quick ITA

TOSHIBA CORPORATION

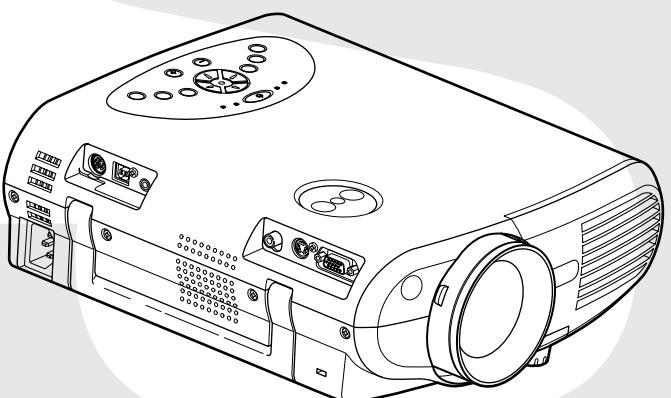
1-1, SHIBAURA 1-CHOME, MINATO - KU, TOKYO 105 - 8001, JAPAN

TOSHIBA

FILE NO. 330-200103

SERVICE MANUAL

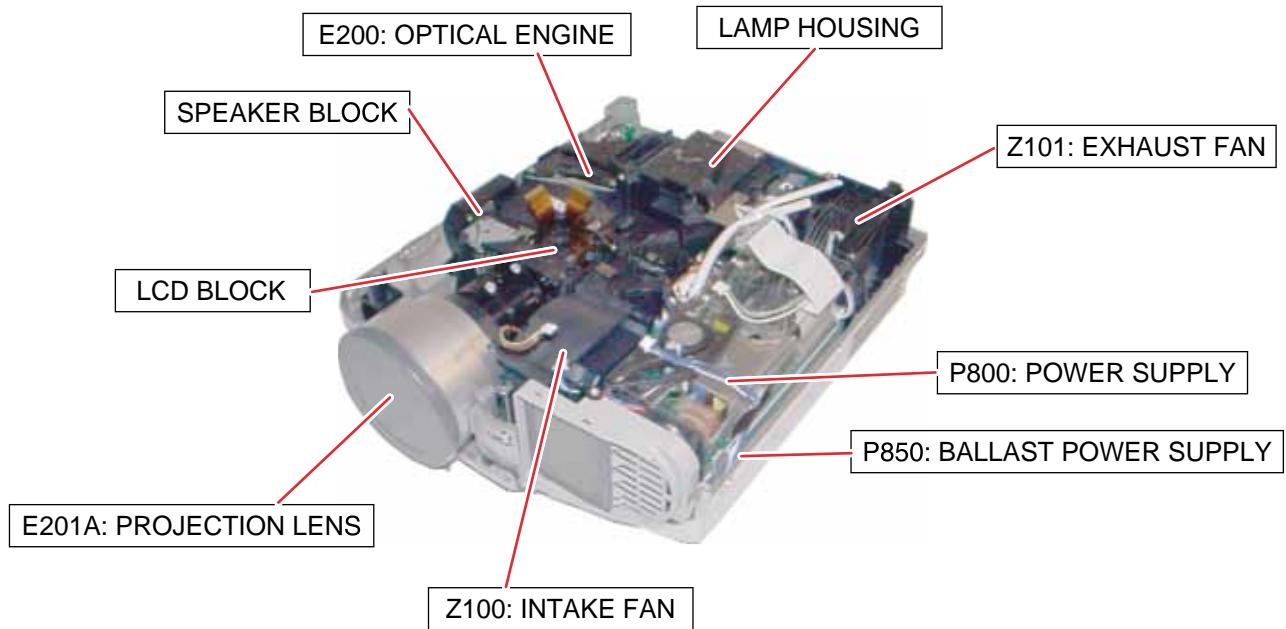
3LCD DATA PROJECTOR
TLP-250/251/250C/251C
TLP-550/551/550C/551C



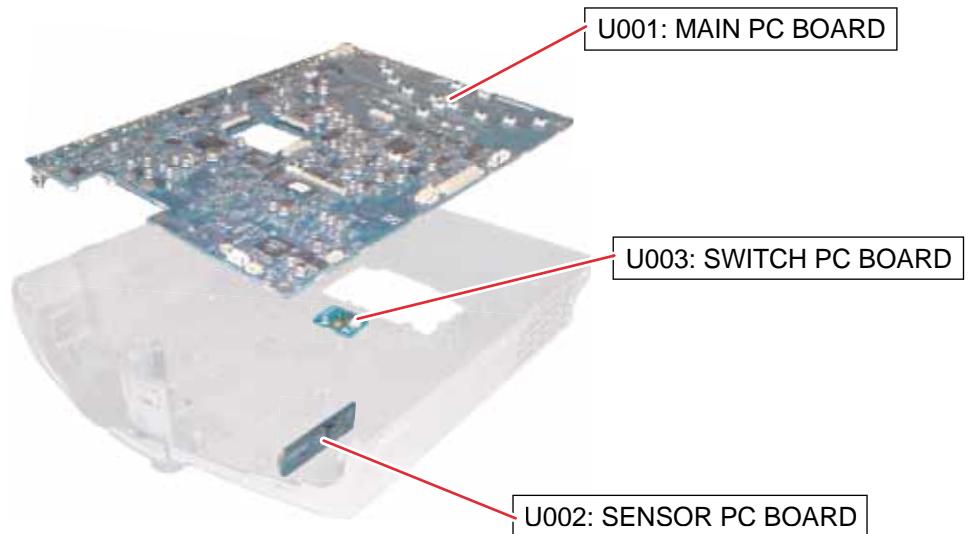
SECTION 1

PART REPLACEMENT AND ADJUSTMENT PROCEDURES

1. LOCATION OF MAIN PARTS



2. LOCATION OF PC BOARD



CAUTIONS BEFORE SERVICING

Electronic parts are susceptible to static electricity and may easily be damaged, so do not forget to take proper grounding treatment as required.

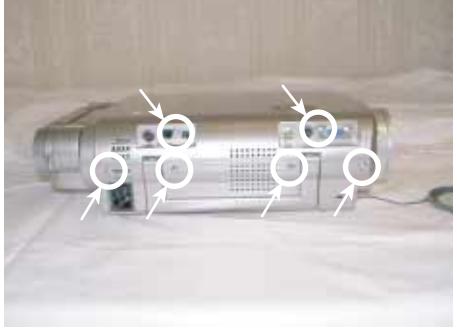
Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screwdriver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

3. REPLACEMENT OF MECHANICAL PARTS

3-1. Lamp Assembly

Step	Figure	Explanation
1		Loosen 2 screws (M3 x 8). These screws are retained with split washers.
2		Remove the lamp cover.
3		Loosen 2 screws that secure the lamp module (M3 x 8). These screws are retained with split washers.
4		Lift the lamp module and slide out from the projector.

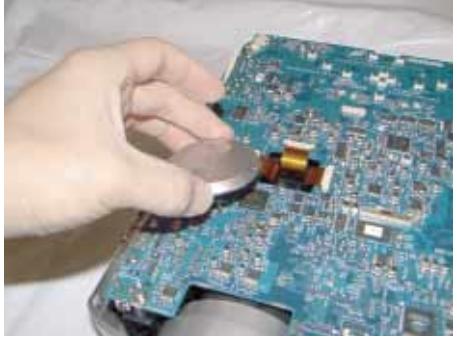
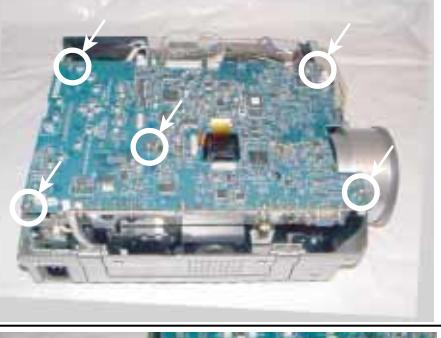
3-2. Top Cover

Step	Figure	Explanation
1		<p>[Left Side]</p> <p>Remove 3 screws (M3 x 6).</p> <p>Screw : type [M-1]</p> 
2		<p>[Right Side]</p> <p>Remove 6 screws (M3 x 6).</p> <p>Screw : type [M-1]</p> 
3		<p>[Front]</p> <p>Slide front cover to the right.</p>
4		<p>Remove front cover.</p>
5		<p>Remove 1 screw (M3 x 6).</p> <p>Screw : type [M-1]</p> 

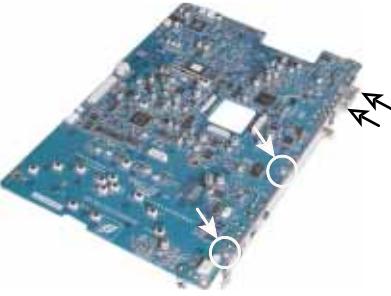
3-2. Top Cover (Continued)

Step	Figure	Explanation
6		[Rear] Remove 1 screws (M2 x 6). Screw : type [M-1] 
7		Top cover can be removed by lifting left edge.

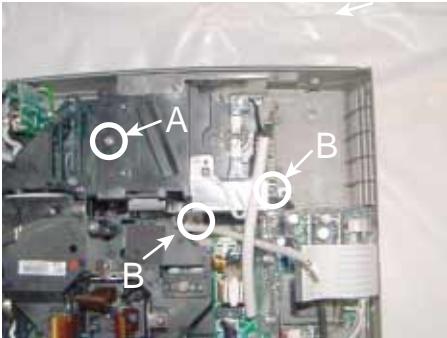
3-3. Main PC Board

Step	Figure	Explanation
1		Remove lens shift dial.
2		Remove all cables and connectors.
3		Remove 5 screws (M3 x 6). Screw : type [M-1] 
4		Remove 1 screws (M3 x 6). Screw : type [M-1]  [Note] The screw here is also fixing the grand wire.

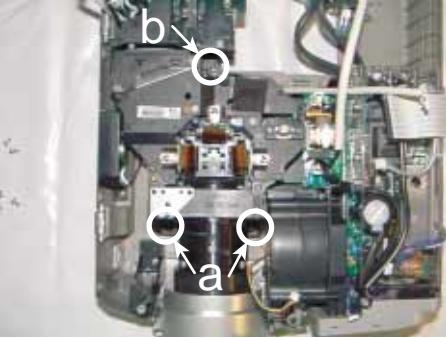
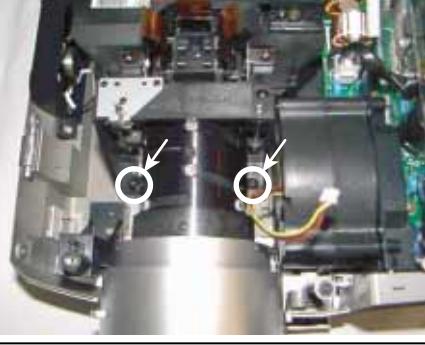
3-3. Main PC Board (Continued)

Step	Figure	Explanation
5		<p>Remove 2 screws (M3 x 6).</p> <p>Screw : type [M-1]</p>  <p>Remove 2 screws (M3 x 8).</p> <p>Screw : type [M-10]</p> 
6		<p>Remove metal plate.</p>

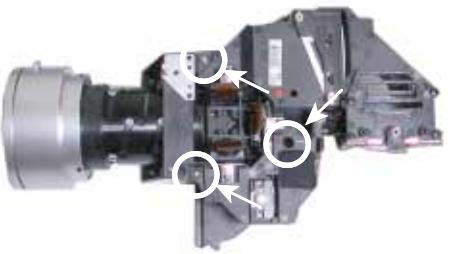
3-4. Optical Engine

Step	Figure	Explanation
1		<p>Remove 1 screw (M3 x 6).....A Screw : type [M-1]</p>  <p>Remove 2 screws (3 x 8).....B Screw : type [M-2]</p> 
2		<p>Remove 2 screws (3 x 8) Screw : type [M-2]</p> 
3		Remove Thermal switch.
4		Remove metal plate.
5		<p>Remove 2 screws (3 x 8) Screw : type [M-2]</p> 

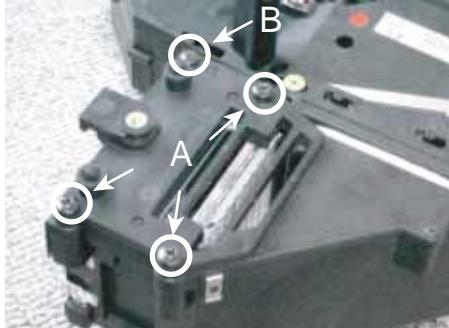
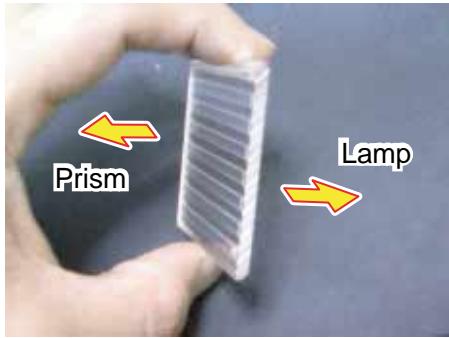
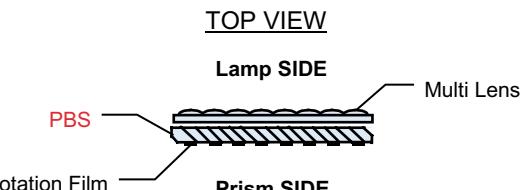
3-4. Optical Engine (Continued)

Step	Figure	Explanation
6		Remove lamp housing.
7		Remove 3 screws (M3 x 15). Screw : type [M-4] 
7a		
7b		

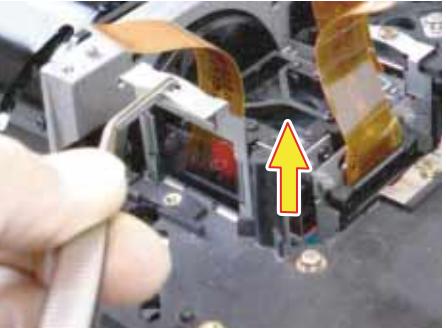
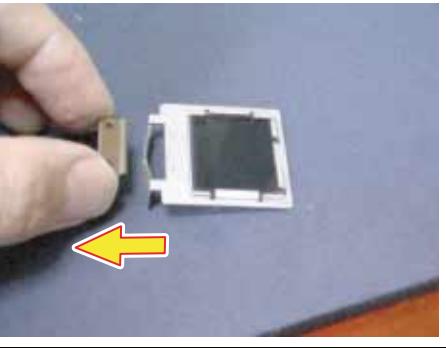
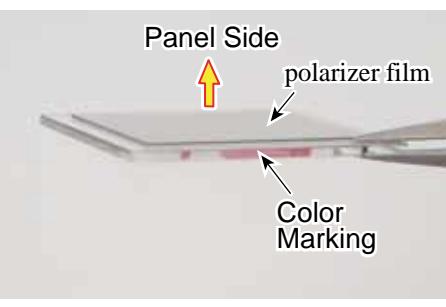
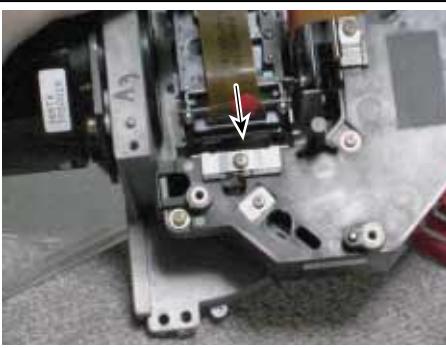
3-4. Optical Engine (Continued)

Step	Figure	Explanation
8		<p>Remove 3 screws (M3 x 8) .</p> <p>Screw : type [M-2]</p> 
9	 <p>Sub frame</p>  <p>Main frame</p>	<p>Separate the main frame and sub frame from the engine block.</p>

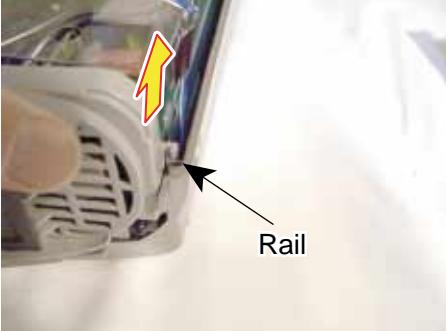
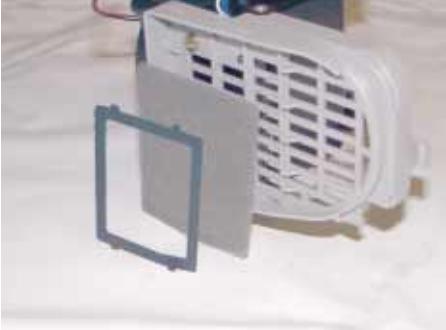
3-5. MULTI-PBS (Polarizing Beam Splitter)

Step	Figure	Explanation
1		<p>Remove 3 screws (M3 x 15)A Screw : type [M-8]</p>  <p>Remove 1 screws (M2.5 x 15)B Screw : type [M-9]</p> 
2		Press the Multi-PBS up from cooling space.
3		Remove the Multi-PBS.
4		<p>[Note] Make sure the direction of the PBS when you install.</p> 

3-6. Polarized Plate

Step	Figure	Explanation
1		Remove the one screw.
2		Remove the stopper.
3		Remove the holder and polarized plate.
4		<p>[Note]</p> <p>The film side must be faced to the LCD panel when installing and the color must be related with the color of LCD panel.</p>
5		Tighten a screw in the position where 100% black image screen gets the darkest.

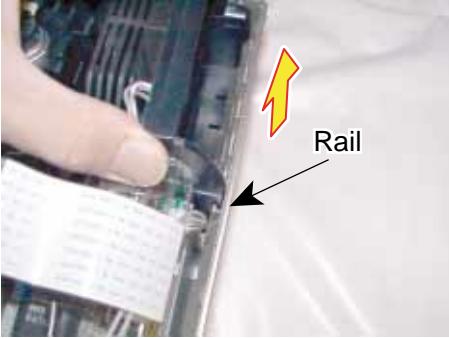
3-7. Intake Fan

Step	Figure	Explanation
1		<p>Remove 2 screw (3 x 8).</p> <p>Screw : type [M-2]</p> 
2		<p>Remove intake fan block from the bottom cabinet. (It pulls up along with a rail.)</p>
3		<p>Remove filter block from the bottom cabinet.</p>
4		<p>The filter is split like this.</p>
5		<p>Remove 2 screws (3 x 8).</p> <p>Screw : type [M-2]</p> 

3-7. Intake Fan (Continued)

Step	Figure	Explanation
6		<p>Remove 2 screw (3 x 47).</p> <p>Screw : type [M-5]</p> 
7		<p>The Intake fan block is split like this.</p>

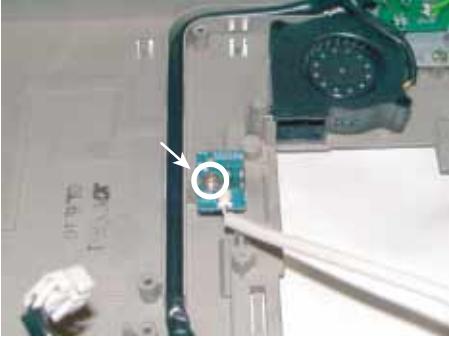
3-8. Exaust Fan

Step	Figure	Explanation
1		<p>Remove 1 screw (3 x 8).</p> <p>Screw : type [M-2]</p> 
2		<p>Remove intake fan block from the bottom cabinet. (It pulls up along with a rail.)</p>
3		<p>Remove 2 screws (3 x 15).</p> <p>Screw : type [M-6]</p> 
4		<p>The exaust fan block is split like this.</p>

3-9. Speaker Block

Step	Figure	Explanation
1		<p>Remove 2 screws (3 x 8).</p> <p>Screw : type [M-2]</p> 
2		<p>Remove 1 screw (3 x 8).</p> <p>The speaker will be removed like this.</p> <p>Screw : type [M-2]</p> 

3-10. Switch PC Board

Step	Figure	Explanation
1		<p>Remove 1 screws (3 x 8). Screw : type [M-2]</p> 
2		<p>[Note] The safety interlock switch is pushed when the lamp cover is replaced.</p>

3-11. Power Supply

Step	Figure	Explanation
1		Disconnect the cable from the AC inlet.
2		<p>A : Remove 1 screw (M3 x 5). B : Remove 1 screw (3 x 8).</p> <p>Screw : type [M-3]</p>  <p>Screw : type [M-2]</p> 
3		<p>Remove 1 screw (3 x 8).</p> <p>Screw : type [M-2]</p> 
4		Lift up back side of the power unit .
5		Remove 2 hook from the bottom cabinet in the direction of this arrow.

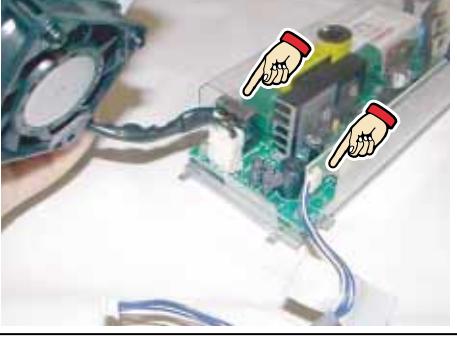
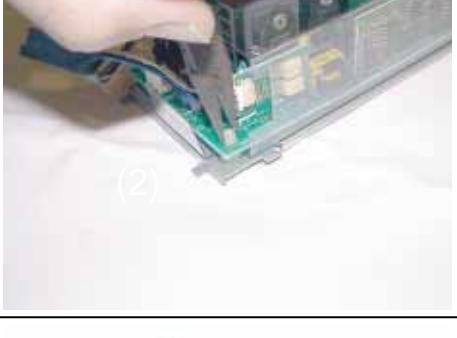
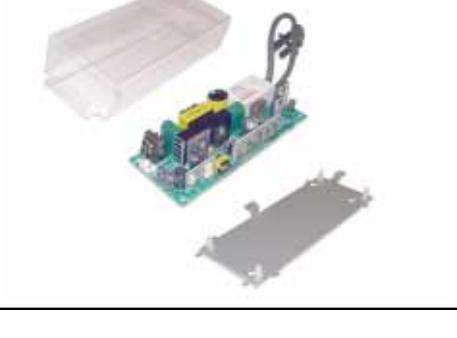
3-11. Power Supply (Continued)

Step	Figure	Explanation
6		<p>Remove 2 screws (3 x 8)</p> <p>Screw : type [M-2]</p>
7		Remove EMC filter unit.

3-12. Ballast power Supply

Step	Figure	Explanation
1		Remove black tape.
2		Remove 2 hooks in the direction of this arrow.

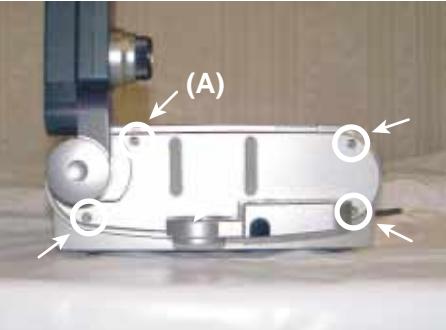
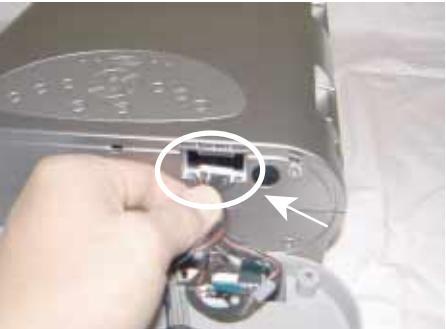
3-12. Ballast power Supply (Continued)

Step	Figure	Explanation
3		Lift up the main power supply unit.
4		Disconnect the power supply cable and control cable.
5		Release 4 P.C. board holder.
6		Release P.C. board holder by using tweezers.
7		Ballast power supply block is split like this.

3-13. PCB Holder

Step	Figure	Explanation
1		<p>Remove 1 screw (3 x 8).</p> <p>Screw : type [M-2]</p> 

3-14. Document camera (How to remove from the main body)

Step	Figure	Explanation
1		<p>Remove 5 screws (M3 x 6).</p> <p>Screw : type [M-1]</p> <p>[Note] Please remove the screw (A) last. Then, support the camera block by hand, otherwise it falls.</p> 
2		<p>Disconnect the connector from the main body.</p> <p>[Note] For disassembly of the document camera, refer to page 3-6.</p>

3-15. Screws for Mechanical Parts

Type	Form	Size	Location
M-1		M3 x 6	Top Cover (11), Main PCB (8), Document camera (5) and Lamp House (1)
M-2		3 x 8	Power Supply and Ballast Power Supply (4), Ballast cable connector (2), Intake FAN (4), Switch PCB(1), Lamp House(5), Exhaust FAN (1), Optical Engine(3), Speaker Block (3) and PCB Holder(1)
M-3		3 x 6	Power Supply Earth Wire(1)
M-4		3 x 12	Optical Engine (3)
M-5		3 x 47	Intake FAN (2)
M-6		3 x 12	Exhaust FAN (2)
M-7		2 x 4	Camera Cover (3)
M-8		3 x 15	Optical Engine PBS Cover (3)
M-9		2.5 x 15	Optical Engine PBS Cover (1)
M-10		M3 x 8	Main PCB (2)

3-16. How to disconnect FFC/FPC Connector

Step	Figure	Explanation
1		Conformity of Location number. MAIN PCB: PJ701
2		Release Two hooks. [Note] Hooks stop on the way. Please do not pull out by superfluous power.)
3		FFC/FPC cable can be disconnected.

4. ELECTRICAL ADJUSTMENT

4-1. Preparation

< Test Equipments and Jigs >

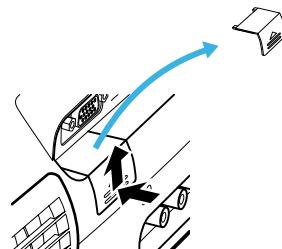
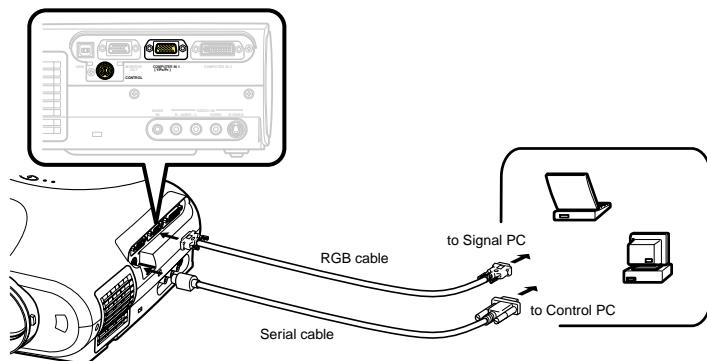
- Personal computer (Windows P/C, OS:windows 95/98)
- Adjustment software (SINGO98.exe, FieldAdjust.exe)
- RGB cable, Serial control cable (for RS-232C)

< Connection and Setting of Personal Computer >

(1) Connection of personal computer

Connect a computer as shown in following Fig. 1-4-1.

Use the supplied serial control cable for connection.



Remove the RS232C cover.

Fig. 1-4-1

(2) Shading adjustment software

When the shading adjustment software (FieldAdjust.exe) is started, screen like the following image (Fig. 1-4-2) appears.

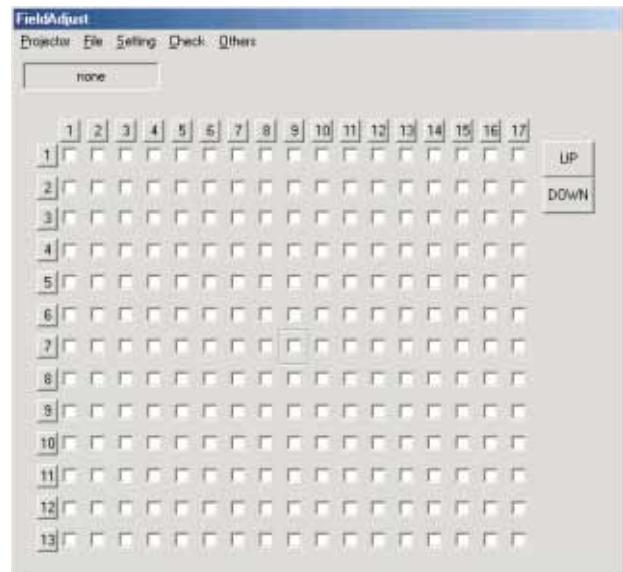


Fig. 1-4-2

4-2. Shading adjustment software

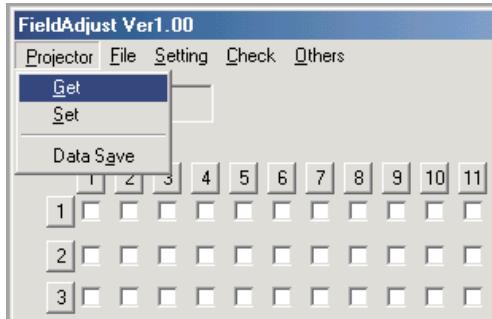
1. When DRIVE PCB is exchanged.

- Step1. Get shading data from old Drive PCB.
- Step2. Save the data to PC memory.
- Step3. Exchange the Drive PCB.
- Step4. Set the old data to new Drive PCB.

(Before Exchanging Drive PC Board)

1-1 Get the shading data from the projector

- (1) Select [get] from [Projector] menu.



- (2) Select communication port and press [Go] button.

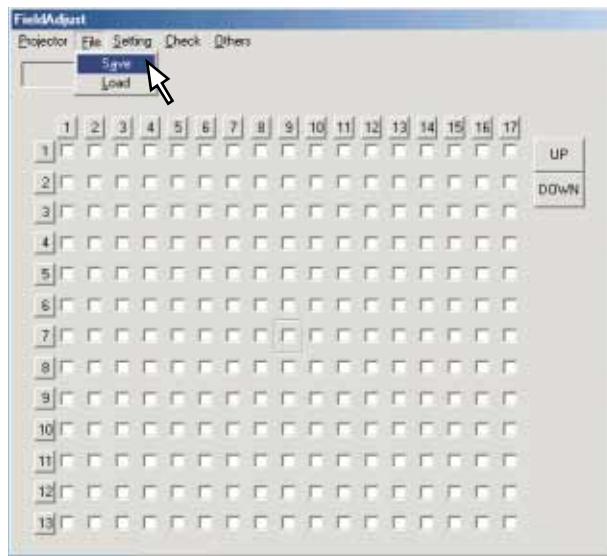


- (3) After getting the shading data, the following message appears. Press [OK] button.

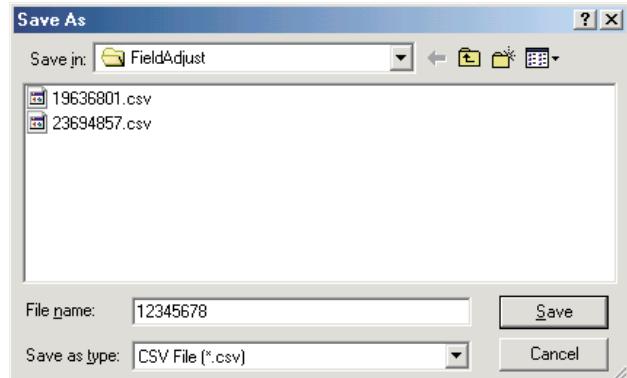


1-2 Save the original shading data to PC

- (1) Select [Save] from [File] menu.



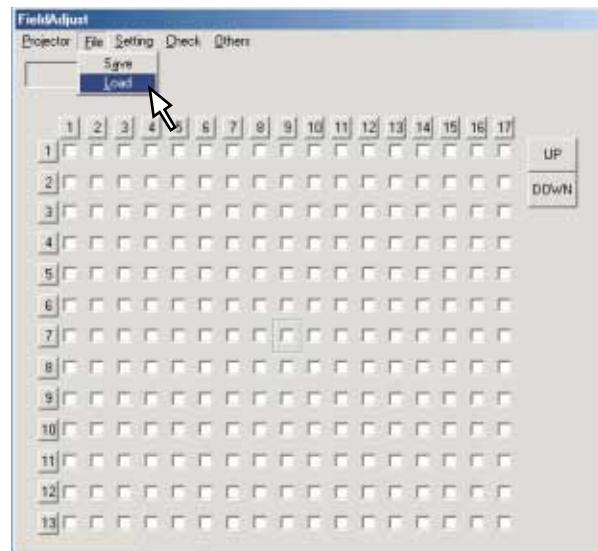
- (2) Input file name and press [Save] button.



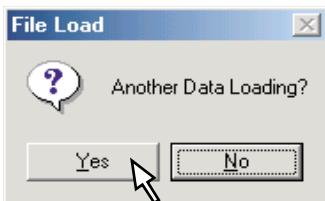
(After Exchanging Drive PC Board)

1-3 Set the shading data to the projector

- (1) When you load the data from PC, select [Load] from [File] menu.



(2) Press [Yes] button.

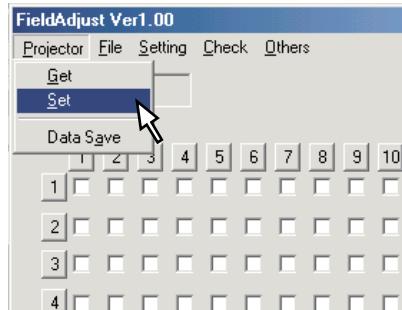


(3) Input file name and press [Open] button.



1-4 Set the shading data to the projector

(1) Select [set] from [Projector] menu.



(2) Select communication port and press [Go] button.



(3) If you save data to the projector press [Yes] button.



2. When LCD Panels are exchanged.

Step1. Adjust the VCOM data (front and celing) .

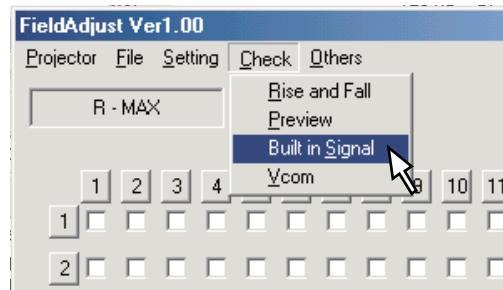
This adjustment makes the flicker of a panel into the minimum.

Step2. Adjust the Shading data.

Step3. Set the new data to the Projector.

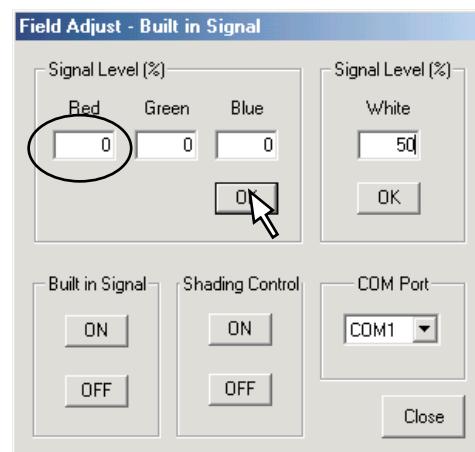
2-1 Adjust the VCOM data

(1) Select [Built in Signal] from [Check] menu.
This menu can output the signal pattern built in the projector.



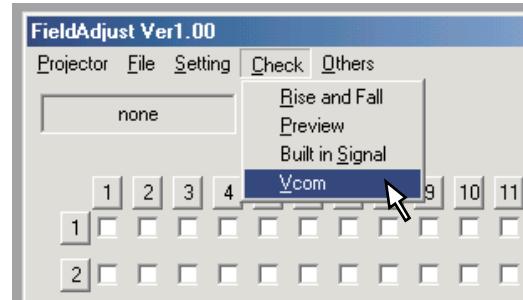
(2) Set the color level and press [OK] button

(When you adjust Red VCOM, set red level 100%).

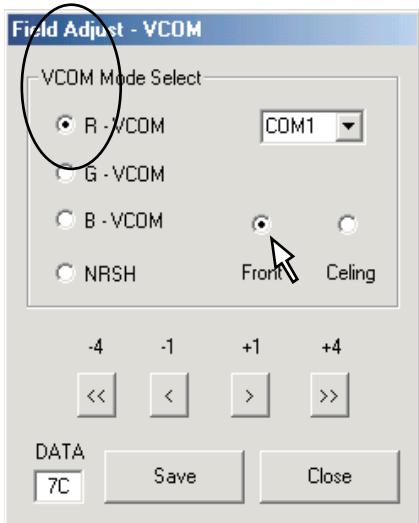


After setting press [Close] button.

(3) Select [Vcom] from [Check] menu.

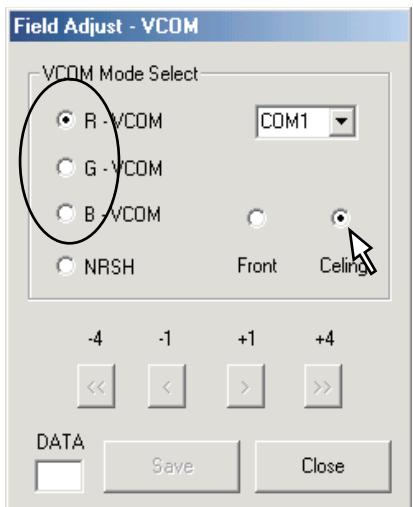


(4) Select [Front] button first, and select R,G or B button.
 (When you adjust the R level, then select R-VCOM



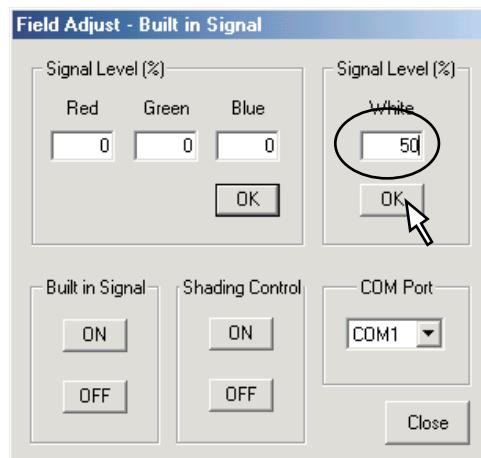
(5) Push [+1] or [-1] button, change data and look for the point with which a flicker serves as the minimum. If you push [+4] or [-4] button, the data moves fast.

(6) Next, select [Celing] button, and select R,G or B button.

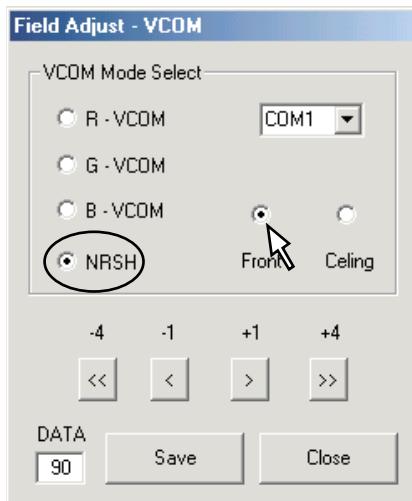


(7) After adjusting, push [Save] button .

(8) Change the internal signal pattern. Set the white level 50% and press [OK] button.



(9) Select [Front] button, and select [NRSH] button.

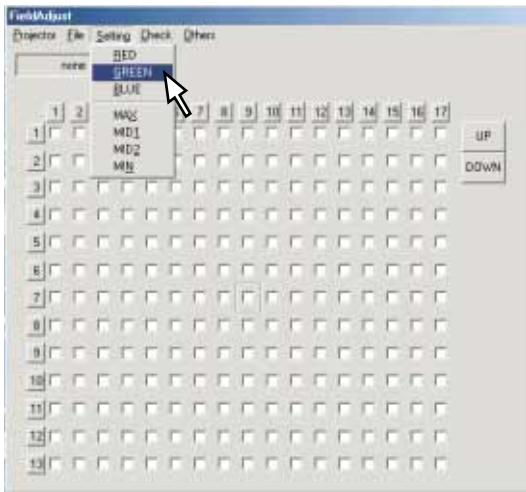


(10) Push [+1] or [-1] button, change data and look for the point with which a vertical stripe serves as the minimum. If you push [+4] or [-4] button, the data moves fast.

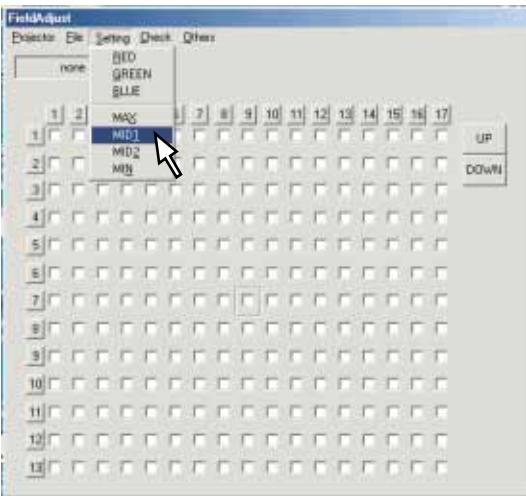
(11) After adjusting, push [Save] button .

2-2 Adjust the shading data

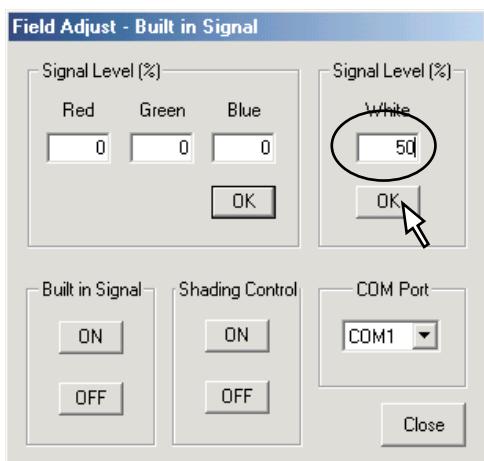
(1) Select adjusting color (Red/Green/Blue) from the [Setting] menu.



(2) Select adjusting level (Max/Mid1/Mid2/Min) from the [Setting] menu.



(3) Select the internal signal pattern. (White Pattern)
Set the following level and press [OK] button.



After setting push [Close] button.

Note:

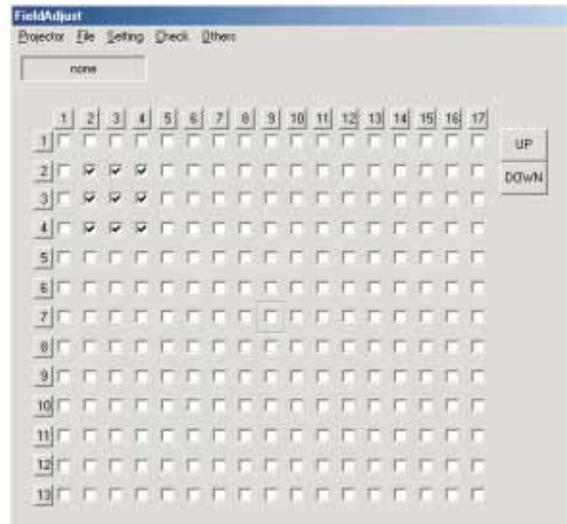
You must change the builtin signal level corresponding to the chosen level.

Max : 75%
Mid1 : 50%
Mid2 : 26%
Min : 11%

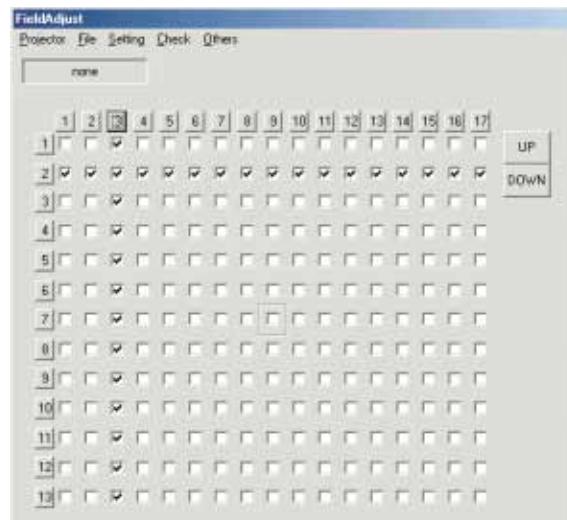
Example:

If you select [Mid1], set the builtin signal level 40%.

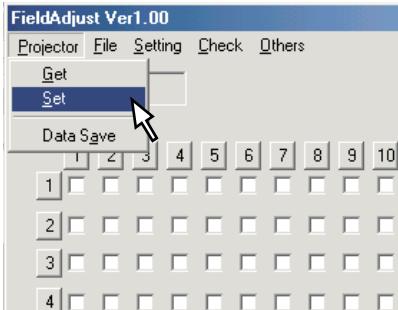
(4) Select the adjusting area (check box). Click the [up] or [down] button to change the shading data.



(Note) When a number button is chosen, a straight line can be chosen.

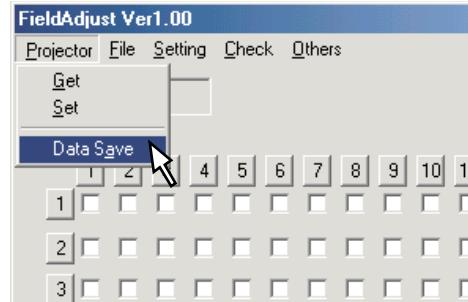


(5) Select [Set] from the [Projector] menu.

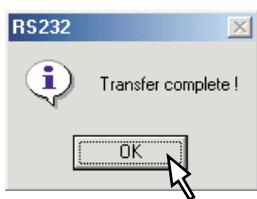


2-3 Set the shading data to the projector

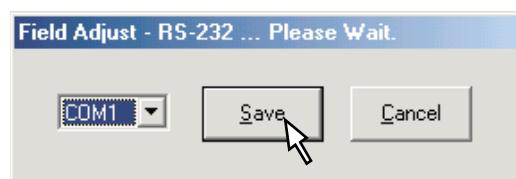
(1) Select [Data Save] form the [Projector] menu.



(6) After sending the all data, the following message appired. Click the [OK] button.



(2) Push [Save] button.



(7) The same adjustment is made in othe colors and each four levels.

(8) Repeat the step of (1) to (7) until shading will be in a good state.

SECTION 2

SERVICING DIAGRAMS

1. TROUBLE SHOOTING

CAUSE	CHECK POINT	CHEK ITEM	JUDGE
Power is not on	Flat cable of Power supply (disconnect PJ003)	Standby voltage (See page 2-3)	(NG) → Power supply is NG. (OK) → Check next step.
	PJ003(connect PJ003)	Standby voltage	(NG) → Main PCB is NG, or any cable connection is NG.
Power off during use	LED Display	Lighting pattern	See 2-2
Lamp is not on	Lamp	Any damage inside or not	(Damaged) → Change with new lamp. (Not Damaged) → Check Lamp cover or lamp power supply. However, even if the lamp has no damage, there is the case it has trouble also.
No image	"No Signal" OSD message	Indicated or not	(Indicated) → RGB/Video terminal is NG, or Main PCB is NG. (Not Indicated) → Check next step.
	Test signal R G B	Signal shape	(Correct) → LCD panel is NG, or PJ851/PJ901/PJ951 is NG. (Incorrect) → Main PCB is NG.

ATTENTION

LED displays various error pattern. (See 2-2)

Be careful because the same error occurs in the bad contact of the cable as well.

LED error combination display always show the latest error.

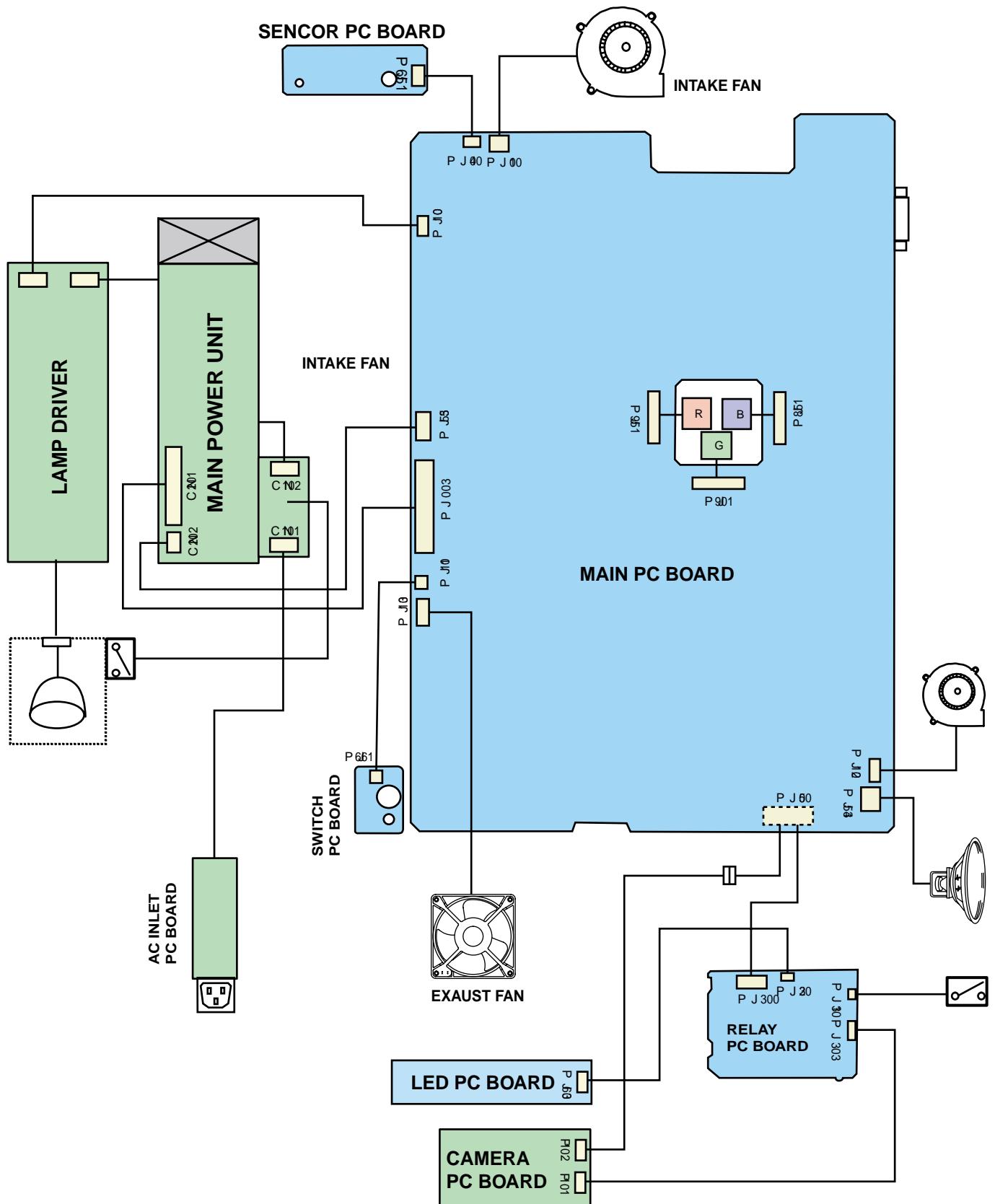
2. LED DISPLAY (Problems Shown on LED Indicator Combination)

Error Cord No.	Status of Indicator Light				Cause and Trouble	Solution
	FAN	TEMP	LAMP	ON		
00	● (OFF)	● (OFF)	● (OFF)	● (OFF)	Standby-power is not on > There's a problem with the power unit or system microcomputer.	Check the power unit. Check the connector. Check the main PC board.
01	● (GREEN)	● (OFF)	● (RED)	● (RED)	The lamp went out during use or the lamp will not switch on > The bulb has reached the end of its life.	Change new lamp. There may also be trouble in ballast power supply.
02	● (GREEN)	● (OFF)	● (RED) flashing	● (RED)		
03 04	● (GREEN)	● (OFF)	● (Orange) flashing	● (RED)	The power turns off > Trouble with the Lamp cover	The lamp cover is not properly attached. Unplug the power cord and reattach the lamp cover.
05	● (GREEN)	● (Orange)	● (OFF)	● (RED)	The power turns off or does not come on > The inside is too hot, or the projector has been working in an area of high temperature. Error Cord 05: Near the Lamp housing 06: Near the Intake fan 07: Polarized filter	Place the projector correctly so the intake and exhaust fan's holes are not covered. Turn the projector off, and leave it for a while, and turn it on again. Clean the air filter.
06	● (GREEN)	● (RED)	● (OFF)	● (RED)		
07	● (GREEN)	● (Orange) flashing	● (OFF)	● (RED)		
09	● (RED)	● (OFF)	● (OFF)	● (RED)	The power turns off or does not come on > Trouble with the cooling fans. Error Cord 09: Lamp fan 10: Exhaust fan 11: Intake fan	Check the each cooling fan.
10	● (Orange) flashing	● (OFF)	● (OFF)	● (RED)		
11	● (RED) flashing	● (OFF)	● (OFF)	● (RED)		
12	● (GREEN)	● (OFF)	● (Orange)	● (RED)	The power turns off > System micron error.	
13	● (GREEN)	● (Orange)	● (GREEN)	● (RED)	Error Cord 12: Device Error 13: Status Error	Wait for two minutes, and turn on the power again.

NOTE

 In each mode shown with this color, the projector returns to the standby mode after error indication for about 2 minutes.

3. WIRING BLOCK DIAGRAM



4. CONNECTOR PIN ASSIGNMENT

PJ001 (MAIN) \leftrightarrow INTAKE FAN

1	FAN4 CONTROL V	+6 to +12V
2	GND	0V
3	FAN4 PULSE	+3.3V(Pulse)

PJ003 (MAIN) \leftrightarrow POWER SUPPLY

1	+4.5V	+4.5V
2	+4.5V	+4.5V
3	+4.5V	+4.5V
4	+4.5V	+4.5V
5	GND	0V
6	GND	0V
7	GND	0V
8	GND	0V
9	+6.5V	+6.5V
10	+6.5V	+6.5V
11	+6.5V	+6.5V
12	+6.5V	+6.5V
13	GND	0V
14	GND	0V
15	GND	0V
16	GND	0V
17	-9V	-9V
18	GND	0V
19	+15V	+15V
20	+15V	+15V
21	GND	0V
22	GND	0V
23	+17V	+17V
24	GND	0V
25	LAMP PWR CONT	N.C.
26	AC FREQ	+5V(Pulse)
27	FAN PW	0V(ON)/5V(OFF)
28	GND	0V

PJ004 (MAIN) \leftrightarrow PJ651(SENSOR)

1	PW+3.3V	+3.3V
2	PWS3V-SCL	+3.3V/0V
3	PWS3V-SDA	+3.3V/0V
4	GND	0V

PJ006 (MAIN) \leftrightarrow PJ300(RELAY)+CAMERA UNIT

1	CAM-Y	+0.93Vp-p
2	GND	0V
3	CAM-Cr	+1.15Vp-p
4	CAM-Cb	+1.15Vp-p
5	CAM-HD	+3.2Vp-p
6	GND	0V
7	CAM-Vd	1
8	GND	0V
9	GND	0V
10	GND	0V
11	N.C.	0V
12	+17V	+17V
13	GND	0V
14	GND	0V
15	CAM-Rx	+/-7V(data)
16	+6.5V	+6.5V
17	CAM-Tx	+/-7V(data)
18	CAM-DET	0V
19	CAM-REM	+5V
20	CAM-LIGHT	0V(OFF)/5V(ON)
21	CAM-PWR	0V(OFF)/5V(ON)
22	CAM-KEY0	0V(ON)/5V(OFF)
23	CAM-LED	0V(OFF)/5V(ON)
24	CAM-KEY1	0V(ON)/5V(OFF)
25	N.C.	0V
26	N.C.	0V
27	CAM-ARM	0V(down)/5V(up)
28	CAM-KEY3	0V(ON)/5V(OFF)
29	CAM-KEY5	0V(ON)/5V(OFF)
30	CAM-KEY4	0V(ON)/5V(OFF)

PJ010 (MAIN) \leftrightarrow LAMP DRIVER

1	LAMP-ERROR	0V(Normal)/5V(Error)
2	GND	0V
3	FAN+5V	+5V
3	LAMP-PWR	0V(ON)/5V(OFF)
3	N.C.	0V

PJ011 (MAIN) \leftrightarrow PJ661(SWITCH)

1	COVER	0V(Close)
2	GND	0V

PJ012 (MAIN) \leftrightarrow PBS FAN

1	FAN DRIVE	+6 to +12V
2	GND	0V
3	FAN4 PULSE	+3.3V(Pulse)

PJ013 (MAIN) \leftrightarrow EXAUST FAN

1	FAN DRIVE	+6 to +12V
2	GND	0V
3	FAN4 PULSE	+3.3V(Pulse)
4	N.C.	0V

PJ300 (RELAY) \leftrightarrow PJ006 (MAIN)

1	N.C.	0V
2	+17V	+17V
3	GND	0V
4	GND	0V
5	CAM-Rx	+/-7V(data)
6	+6.5V	+6.5V
7	CAM-Tx	+/-7V(data)
8	CAM-DET	0V
9	CAM-REM	+5V
10	CAM-LIGHT	0V(OFF)/5V(ON)
11	CAM-PWR	0V(OFF)/5V(ON)
12	CAM-KEY0	0V(ON)/5V(OFF)
13	CAM-LED	0V(OFF)/5V(ON)
14	CAM-KEY1	0V(ON)/5V(OFF)
15	N.C.	0V
16	N.C.	0V
17	CAM-ARM	0V(down)/5V(up)
18	CAM-KEY3	0V(ON)/5V(OFF)
19	CAM-KEY5	0V(ON)/5V(OFF)
20	CAM-KEY4	0V(ON)/5V(OFF)

PJ301 (RELAY) \leftrightarrow ARM SWITCH

1	CAM-ARM	+5V
2	GND	0V

PJ302 (RELAY) \leftrightarrow PJ360(LED)

1	+15V	+15V
2	GND	0V
3	GND	0V

PJ303 (MAIN) \leftrightarrow CAMERA UNIT

1	+9V	+9V
2	GND	0V
3	+4V	+4V
4	N.C.	0V
5	CAM-Rx	+/-7V(data)
6	CAM-Tx	+/-7V(data)

PJ354 (MAIN) \leftrightarrow SPEAKER

1	SPEAKER OUT	+1V
2	GND	0V

PJ355 (MAIN) \leftrightarrow ???

1	+15V	+15V
2	GND	0V
3	GND	0V

PJ851,PJ901,PJ951 (DRIVE) \leftrightarrow LCD PANEL

1	GND	0 V
2	DIRY	0 /15.5V
3	DY	0 to +15.5V(Pulse)
4	LCCOM R/G/B	
5	NRS	2 to +7V
6	RV12/GV12/BV12	2 to +12V
7	RV11/GV11/BV11	2 to +12V
8	RV10/GV10/BV10	2 to +12V
9	RV9/GV9/BV9	2 to +12V
10	RV8/GV8/BV8	2 to +12V
11	RV7/GV7/BV7	2 to +12V
12	RV6/GV6/BV6	2 to +12V
13	RV5/GV5/BV5	2 to +12V
14	RV4/GV4/BV4	2 to +12V
15	RV3/GV3/BV3	2 to +12V
16	RV2/GV2/BV2	2 to +12V
17	RV1/GV1/BV1	2 to +12V
18	GND	0 V
19	DIRX	0 /15.5V
20	ENBX1	0 to +15.5V(Pulse)
21	ENBX2	0 to +15.5V(Pulse)
22	DX	0 to +15.5V(Pulse)
23	CLX1	0 to +15.5V(Pulse)
24	NCLX1	0 to +15.5V(Pulse)
25	+15.5V	+15.5V
26	+15.5V	+15.5V
27	NRG	0 to +15.5V(Pulse)
28	CLY	0 to +15.5V(Pulse)
29	NCLY	0 to +15.5V(Pulse)
30	DY	0 to +15.5V(Pulse)

SECTION 3

PARTS LIST

SAFETY PRECAUTION

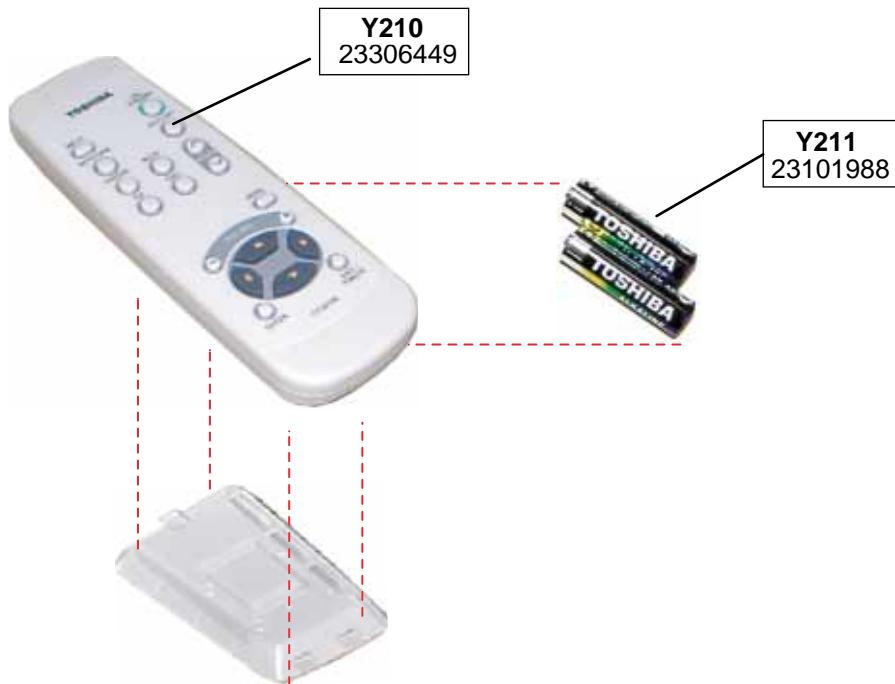
Replace only with part number specified. The mounting position of replacement is to be identical with originals. The substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

NOTICE

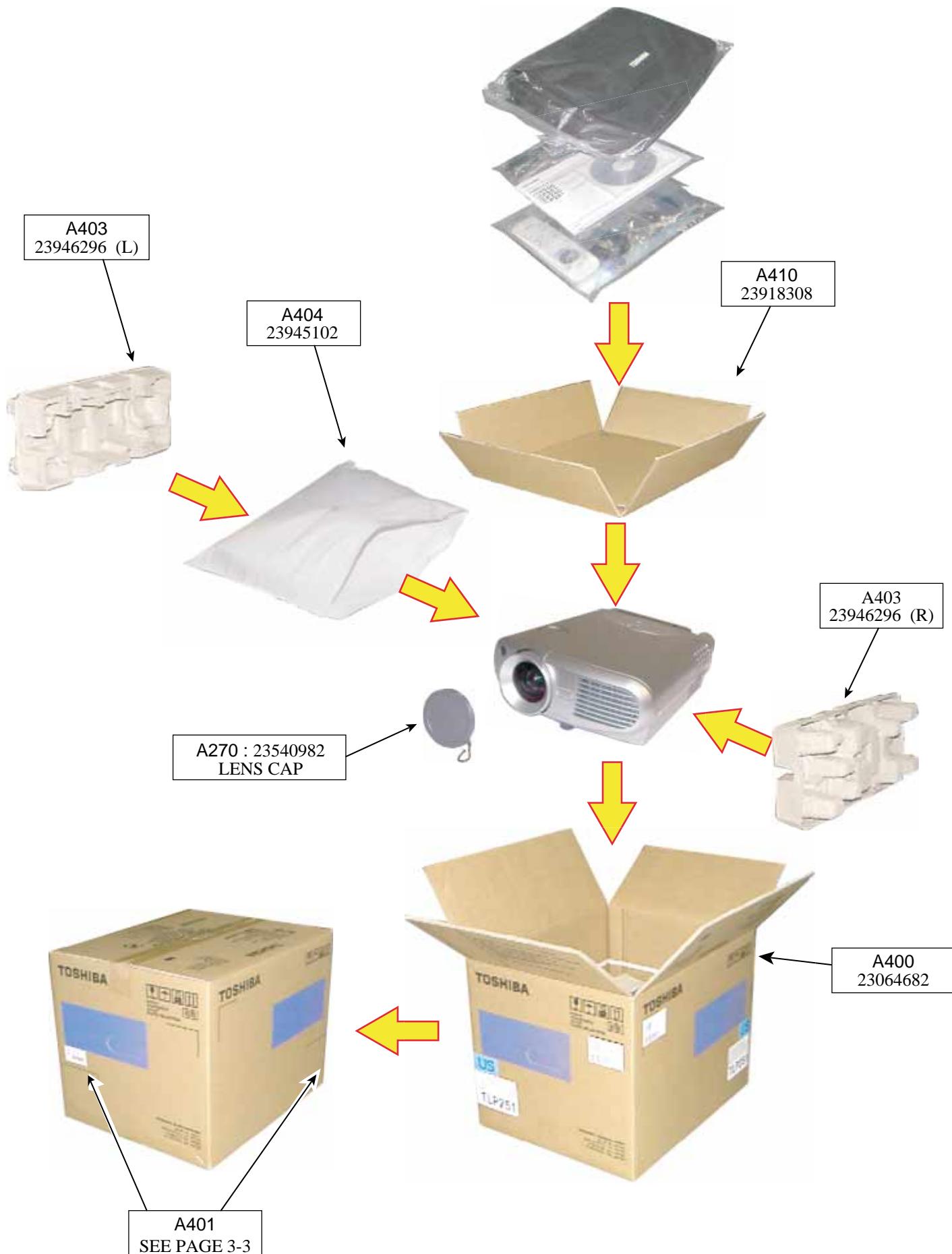
The part number must be used when ordering parts in order to assist in processing, be sure to include the model number and description.

1. EXPLODED VIEWS

1-1. Remote Control Unit



1-2. Packing Assembly

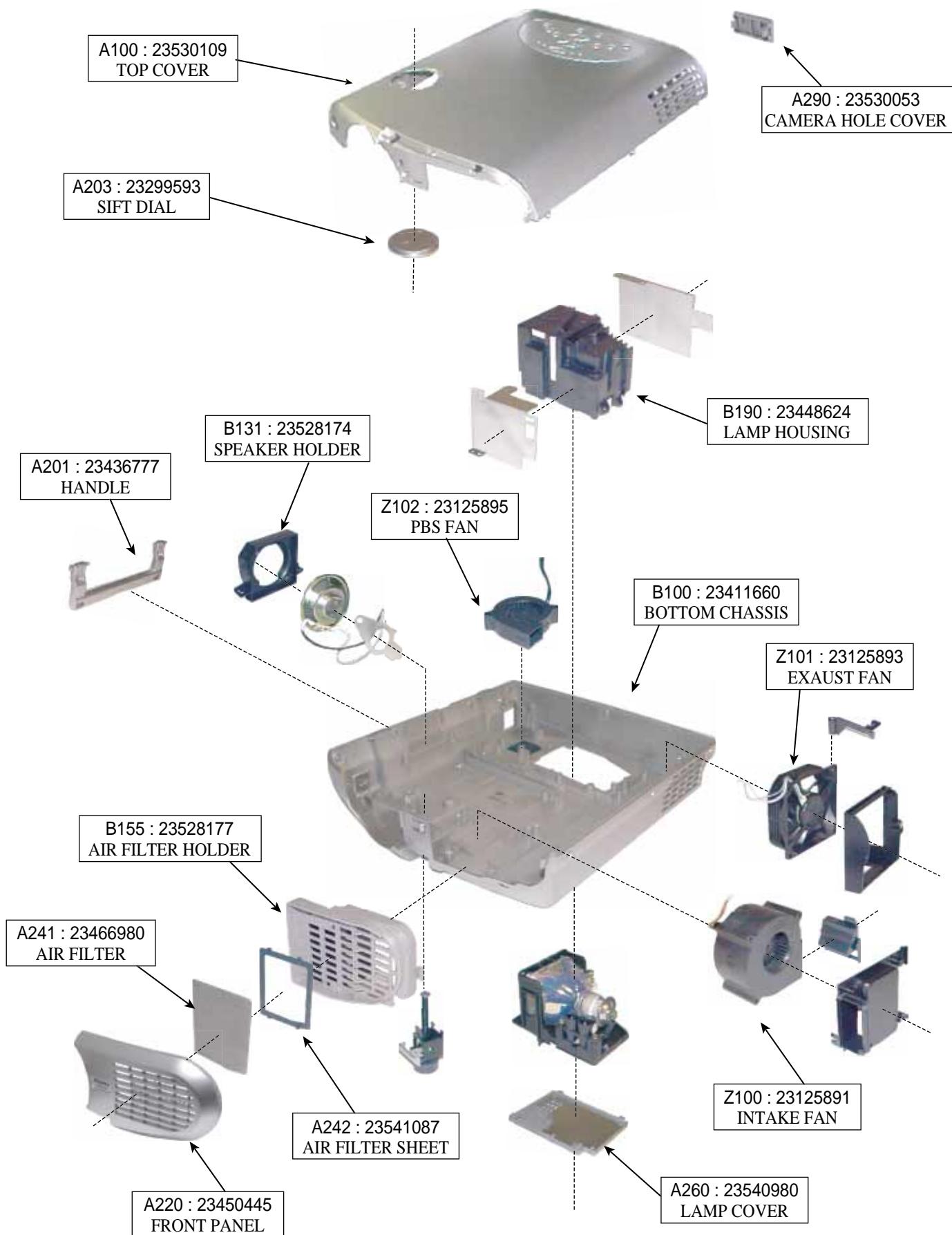


1-3. Accessories

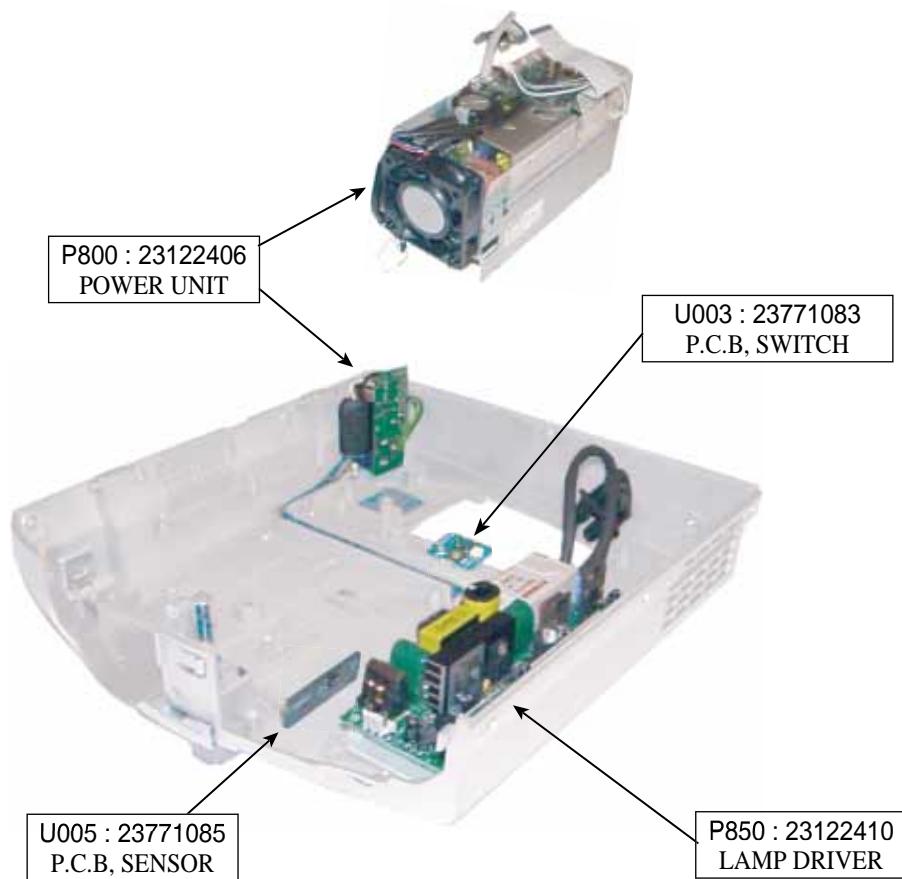
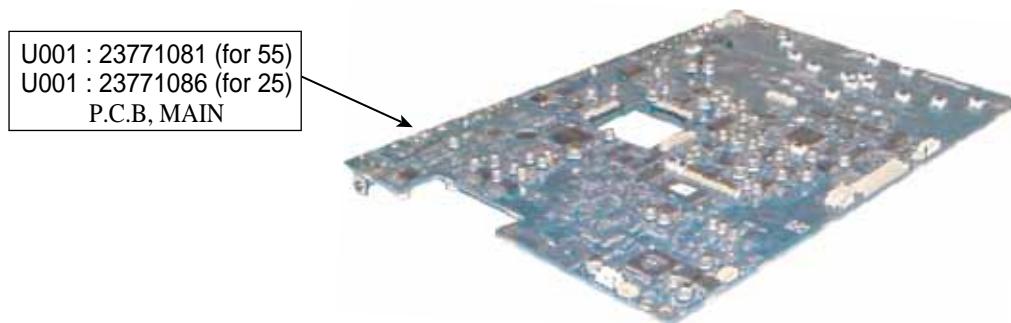
PARTS NO	SN	FORM
Y100	23368803 RGB cable	
Y101	23368800 Video cable	
Y102	23368798 Audio cable for Computer	
Y103	23368799 Audio cable for Video	
Y104	23368676A Control cable (RS-232C)	
Y105	23368796 USB cable	
Y260	23372148 Power cord (U)	
Y260	23372169 Power cord (UK)	
Y260	23372167 Power cord (E)	

PARTS NO	SN	FORM
Y210	23306449	
Y211	23101988	
Y200	23565503	
Y201 Y204 Y205 Y202	23565504 23565506 23565507 23565505	E/F E-EG E-F/SP U-SPA
Y225 Y227 Y226 Y221 Y222 Y223	23589299 23589301 23589300 23589295 23589296 23589297	GER ITA POR ENG FRA SPA
Y265	23448633	

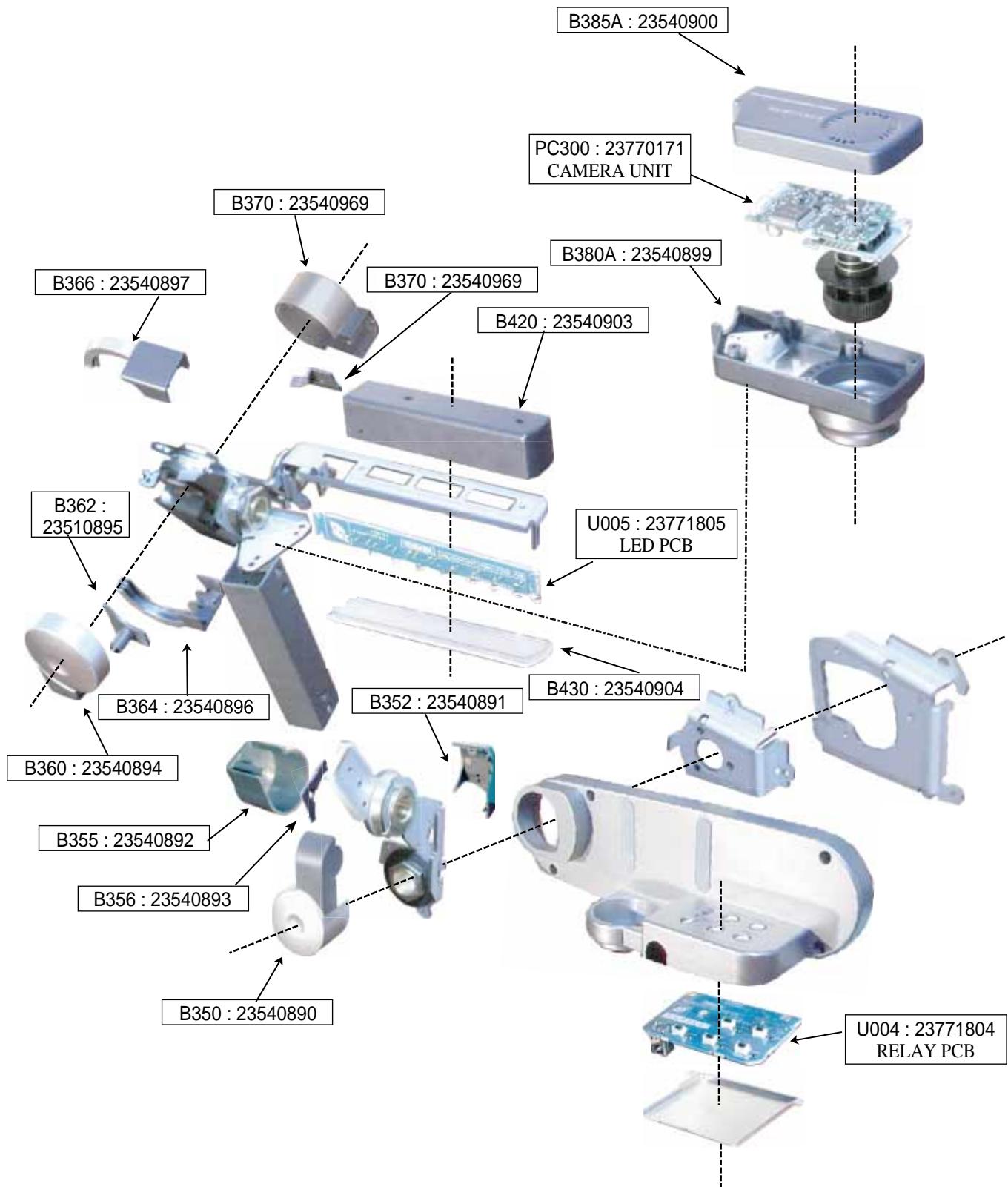
1-4. Chassis Assembly



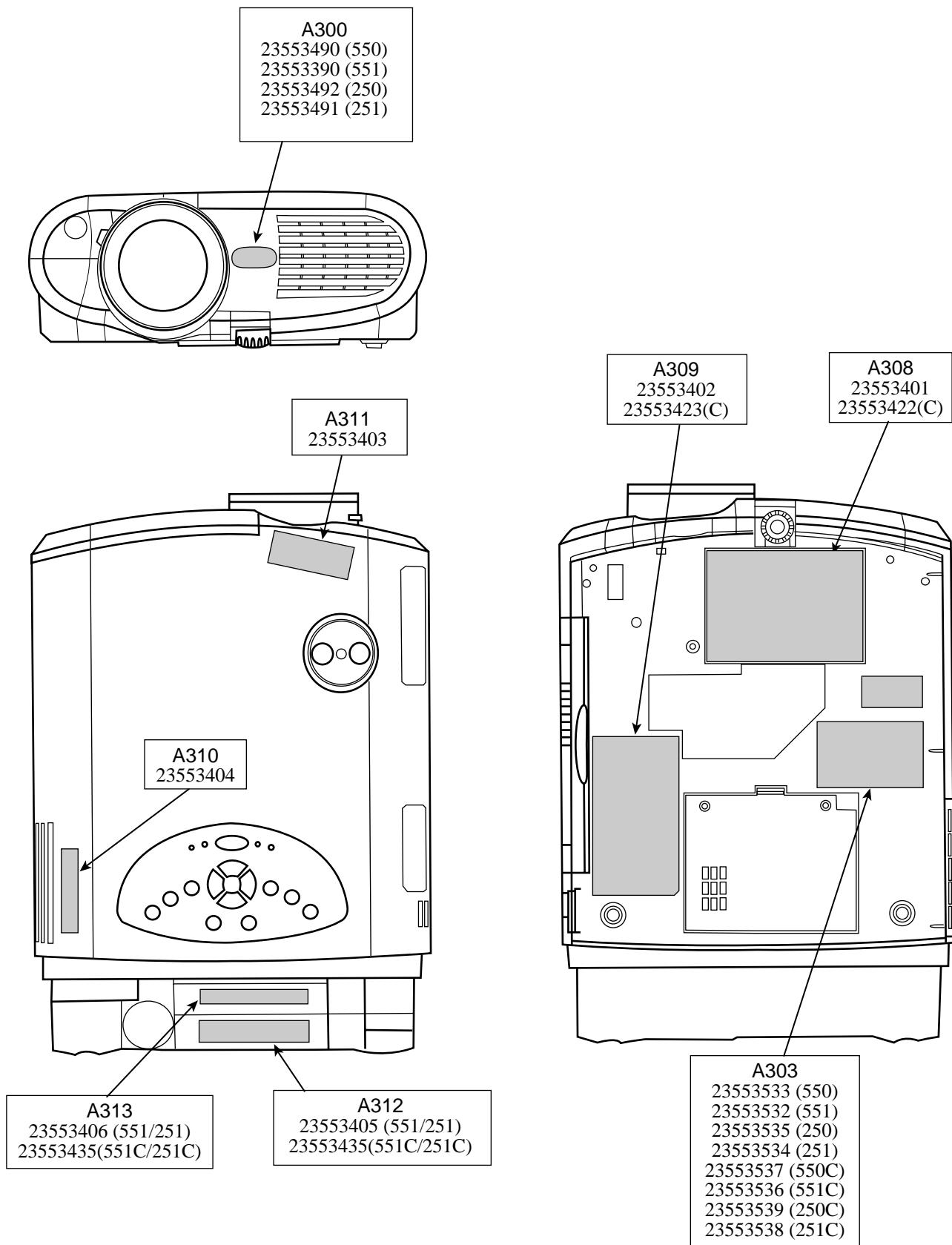
1-5. PC Board and Power Unit Assembly



1-6. Document Camera Assembly



1-7. Labels



2. PARTS LIST

LOCATION NUMBER	PARTS NUMBER	DESCRIPTION	LOCATION NUMBER	PARTS NUMBER	DESCRIPTION
- MECHANICAL PARTS -					
A001???	23530108	TOP	P800	23122406	- ELECTRICAL PARTS -
A100	23530109	TOP COVER	P850	23122410	POWER UNIT (APS-175)
A201	23436777	HANDLE	PC300	23770171	LAMP DRIVER (HVP1503DC-3)
A203	23299593	SHIFT DIAL	U001	23771081	CAMERA UNIT (IKK82LC)
A204	23058300	2W3SZN	U001	23771086	MAIN PC BOARD(550/551)
A220	23450445	FRONT PANEL	U002	23771082	MAIN PC BOARD(250/251)
A241	23466980	AIR FILTER	U003	23771083	SENSOR PC BOARD(550/551)
A242	23541087	AIR FILTER HOLDER	U004	23771084	SWITCH PC BOARD(550/551)
A260	23540980	REAR PANEL	U005	23771085	RELAY PC BOARD
A270	23540982	LENS CAP	Y101	23368800	LED PC BOARD
A273	23553269	CONNECTOR COVER	Y103	23368799	VIDEO CABLE (PIN-PIN 3M)
A300	23553390	FRONT TAG (551)	Y210	23306449	AUDIO CABLE (MINI-PINx2 3M)
A300	23553490	FRONT TAG (550)	Y230	23956341	REMORT CONTROL UNIT
A300	23553491	FRONT TAG (251)	Y265	233448633	NAME TAG (551)
A300	23553492	FRONT TAG (250)	Z102	23125895	SOFT CASE
A303	23553532	RATING LABEL (551)			FAN (D05F-12PH)
A303	23553533	RATING LABEL (550)			
A303	23553534	RATING LABEL (251)			
A303	23553535	RATING LABEL (250)			
A320	23553540	CARTON BOX LABEL (551)	E200	23405066	- OPTICAL PARTS -
A320	23553541	CARTON BOX LABEL (550)	E200?	23405067	OPTICAL ENGINE (4C81-20) for 55
A320	23553542	CARTON BOX LABEL (251)	E201B	23301417	OPTICAL ENGINE (4C81-00) for 25
A320	23553543	CARTON BOX LABEL (250)	E201B	23301423	LCD PANEL(L3P07X-25G01B) for 55
A400	23064682	CARTON BOX	E201G	23301416	LCD PANEL(L3P07X-25G01G) for 55
A403	23946296	PACKING	E201G	23301422	LCD PANEL(L3P07S-21G01G) for 25
A410	22918308	PARTITION	E201R	23301415	LCD PANEL(L3P07X-25G01R) for 55
A502	23564859	SHIPPING LABEL(251)	E201R	23301421	LCD PANEL(L3P07S-21G01R) for 25
			E292	23056500	SW5SZN
B100	23411660	BOTTOM CHASSIS			
B114	23890934	FOOT BUTTON CAP			
B131	23528174	SPEAKER HOLDER			
B153	23528175	INTAKE FAN HOLDER			
B154	23738030	SCREW BRDT2W 3x47			
B155	23528177	FILTER HOLDER			
B190	23448624	LAMP HOUSING			
B210	23528178	EXAUST FAN HOLDER			
B213	23035312	SCREW TTB2W 3x12			
B310	23540888	CAMERA COVER ASSEMBLY			
B320	23890922	CAMERA BASE ASSY			
B330	23890925	ARM COVER ASSEMBLY			
B350	23540890	1ST JOINT COVER M			
B352	23540891	1ST JOINT COVER S			
B355	23840892	2ND JOINT COVER M			
B356	23540893	2ND JOINT COVER S			
B360	23540894	3RD JOINT COVER(1A)			
B362	23510895	3RD JOINT COVER(1B)			
B364	23540896	3RD JOINT COVER(2A)			
B366	23540897	3RD JOINT COVER(2B)			
B370	23540969	3RD JOINT COVER(3A)			
B372	23540970	3RD JOINT COVER(3B)			
B380A	23540899	CAMERA BOTTOM COVER			
B385A	23540900	CAMERA TOP COVER			
B420	23540903	LED BACK COVER			
B421	70391378	SCREW PPC-E-2x3			
B430	23540904	LED CLEAR COVER			
B474	23723264	SCREW PP-2.6x4			
B475	23969946	TAPE (BLACK)			

SPECIFICATIONS

Main Unit

	TLP550 / 250	TLP551 / 251
Power requirements	AC 100-240V 50/60Hz	
Power consumption	240W (standby:15W)	250W (standby:15W)
Mass	4.2kg	5.0kg
Dimensions	W260mmxH95mmxD295mm	W260mmxH95mmxD352mm
Ambient environment	Temperature:0 to 35 cent degree Humidity:30% to 70% HR	
Lamp	160W High pressure Hg lamp	
Speaker	2W (monaural)	
RGB INPUT	RGB signal :(D-sub 15pin)	
VIDEO INPUT	S-Video signal : Mini DIN-4pin Video signal : 1V(p-p), 75 ohm	
CONTROL terminal	Mini DIN-8pin(RS-232C)	
Cabinet Material	ABS	
Document camera		1/2 inches CCD 810000 pixels

LCD

Projection system	3-panel transmission
Panel size	1.3 inches
Driving system	TFT active matrix
Picture elements	55 : 786,432 pixels (1024x768dits), 25 : 480,000 pixels (800x600dits)

Projection Lens

Lens	Zooming lens F=2.02-2.35 f=14.48-17.38mm
Focusing	Manual operation
Zooming	Manual operation

Accessories

Owner's manual	1
Owner's manual (CD-ROM)	1
Wireless remote control	1
Battery	2
Power cord	1
RGB cable	1 (3m)
Video cable	1 (3m)
Audio cable for computer	1 (3m)
Audio cable for video	1 (3m)
Control cable	1 (1.8m)
USB cable	1 (2m)

The design and specification are subject to change without notice.

Trademarks

Macintosh is a registered trademark of Apple computer, Inc.

TOSHIBA CORPORATION

1-1, SHIBAURA 1- CHOME, MINATO - KU, TOKYO 105 - 8001, JAPAN

TOSHIBA

FILE NO. 333-200305
SUPPLEMENT

SERVICE MANUAL

3LCD PROJECTOR

TLP550/551

TLP250/251

TLP560/561

TLP260/261

— SUMMARY —

This service manual covers only different portions from service manual (File No. 330-200103) for TLP55/25 series.

The following table shows you the all-individual parts available as spare parts within optical engine for the model of TLP55/25 and TLP 56/26 series.

Comparison parts table

Location No.	Model 55 series	Model 56 series	Model 25 series	Model 26 series	Parts Description
E200	23405130	23405130	23405140	23405140	Optical Engine
-----	23405132	23405132	23405111	23405111	Optical Main frame
-----	23405171	23405171	23405171	23405171	Optical Sub frame
-----	-----	-----	23405181	23405181	Prism unit (LCD Panel)
-----	23405072	23405072	23405072	23405072	Polarizer (R)
-----	23405073	23405073	23405073	23405073	Polarizer (G)
-----	23405074	23405074	23405074	23405074	Polarizer (B)
-----	23405077	23405077	23405077	23405077	PBS
-----	-----	-----	23405177	23405177	Lens unit
-----	23405178	23405178	23405178	23405178	Focus ring
	23405179	23405179	23405179	23405179	Zoom ring

Note:

The model of TLP 55/56 and 25/26 series, there is no LCD panel available as spare parts.

If you need to replace LCD panel ;

Use Prism unit for 25 and 26 series (SVGA)

Use Main frame for 55 and 56 series(XGA)

Optical Engine Parts

(TLP25/26/55/56 Series)

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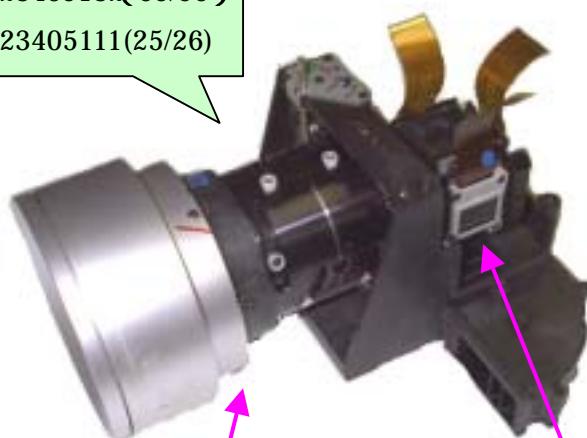
Optical Engine

23405130 (55/56)

23405140 (25/26)

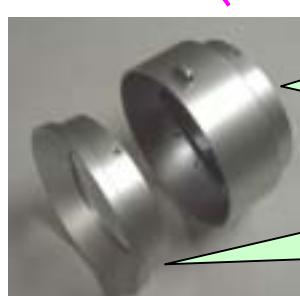
Main Frame
23405132 (55/56)
23405111 (25/26)

Sub Frame
23405071

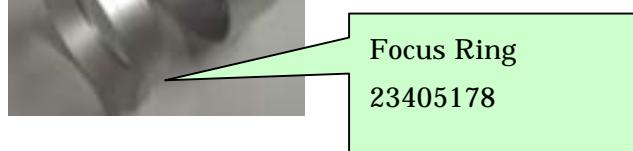


Lens Unit
23405177
(Only 25/26)

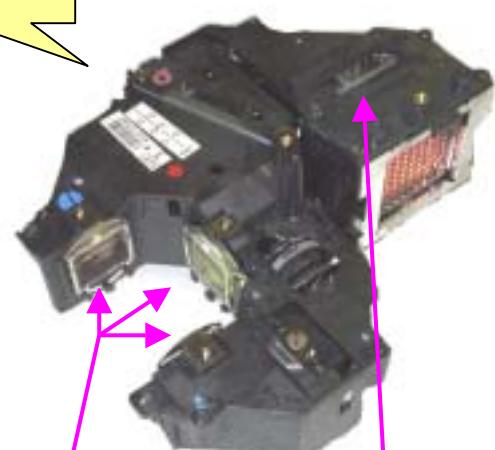
Prism Unit
23405181
(Only 25/26)



Zoom Ring
23405179



Focus Ring
23405178



Polarizer
23405072 (R)
23405073 (G)
23405074 (B)

PBS
23405077

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